

Project Title	Funding	Strategic Plan Objective	Institution
Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders	\$300,000	Q2.S.D	Columbia University
Aberrant synaptic function caused by TSC mutation in autism	\$0	Q2.S.D	Columbia University
ACE Center: Cognitive affective and neurochemical processes underlying is in autism	\$378,379	Q2.Other	University of Illinois at Chicago
A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis	\$0	Q2.S.D	Boston Children's Hospital
Activity-dependent phosphorylation of MeCP2	\$174,748	Q2.S.D	Harvard Medical School
A functional genomic analysis of the cerebral cortex	\$85,471	Q2.Other	University of California, Los Angeles
Allelic choice in Rett syndrome	\$390,481	Q2.S.D	Winifred Masterson Burke Medical Research Institute
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	\$69,813	Q2.S.E	University of Melbourne
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	\$50,434	Q2.S.E	University of Melbourne
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	\$281,742	Q2.S.E	University of Melbourne
A sex-specific dissection of autism genetics	\$150,000	Q2.S.B	University of California, San Francisco
A stem cell based platform for identification of common defects in autism spectrum disorders	\$28,000	Q2.S.D	Scripps Research Institute
Augmentation of the cholinergic system in fragile X syndrome: a double-blind placebo study	\$237,600	Q2.S.D	Stanford University
Autism and the insula: Genomic and neural circuits	\$506,341	Q2.Other	California Institute of Technology
Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture	\$0	Q2.S.D	King's College London
BDNF and the restoration of synaptic plasticity in fragile X and autism	\$490,756	Q2.S.D	University of California, Irvine
Brain lipid rafts in cholesterol biosynthesis disorders	\$60,480	Q2.Other	Medical College of Wisconsin
Caspr2 as an autism candidate gene: A proteomic approach to function & structure	\$312,000	Q2.Other	University of Medicine & Dentistry of New Jersey - Robert Wood Johnson Medical School
Cell adhesion molecules in CNS development	\$535,691	Q2.Other	Scripps Research Institute
Cellular characterization of Caspr2	\$24,666	Q2.Other	University of California, San Diego
Cerebellar plasticity and learning in a mouse model of autism	\$31,250	Q2.Other	University of Chicago
Coordinated control of synapse development by autism-linked genes	\$75,000	Q2.S.D	University of Texas Southwestern Medical Center
Cortical circuit changes and mechanisms in a mouse model of fragile X syndrome	\$278,656	Q2.S.D	University of Texas Southwestern Medical Center
Cortical microcircuit dysfunction as a result of MET deficiency: A link to autism	\$33,955	Q2.Other	Northwestern University
Deciphering the function and regulation of AUTS2	\$28,000	Q2.Other	University of California, San Francisco
Defining cells and circuits affected in autism spectrum disorders	\$669,298	Q2.Other	The Rockefeller University

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Developing novel automated apparatus for studying battery of social behaviors in mutant mouse models for autism	\$0	Q2.Other	Weizmann Institute of Science
Development of novel diagnostics for fragile X syndrome	\$537,123	Q2.S.D	JS Genetics, Inc.
dFMRP and Caprin: Translational regulators of synaptic plasticity	\$12,768	Q2.S.D	University of Washington
Dysregulation of mTOR signaling in fragile X syndrome	\$403,767	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Early expression of autism spectrum disorder in experimental animals	\$54,000	Q2.Other	Neurochlore
Elucidating the function of class 4 semaphorins in GABAergic synapse formation	\$337,818	Q2.Other	Brandeis University
Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome	\$150,000	Q2.S.D	George Washington University
Elucidation of the developmental role of Jakmip1, an autism-susceptibility gene	\$31,042	Q2.Other	University of California, Los Angeles
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	\$470,003	Q2.Other	Memorial Sloan-Kettering Cancer Center
Excessive cap-dependent translation as a molecular mechanism underlying ASD	\$0	Q2.Other	New York University
Frontostriatal synaptic dysfunction in a model of autism	\$48,398	Q2.Other	Stanford University
Functional analysis of EFR3A mutations associated with autism	\$31,250	Q2.Other	Yale University
Functional analysis of neuroligin IV in Drosophila	\$68,652	Q2.Other	University of California, Los Angeles
Functional circuit disorders of sensory cortex in ASD and RTT	\$254,976	Q2.S.D	University of Pennsylvania
Functional role of IL-6 in fetal brain development and abnormal behavior	\$41,800	Q2.Other	California Institute of Technology
Function and dysfunction of neuroligins in synaptic circuits	\$450,000	Q2.Other	Stanford University
Function and structure adaptations in forebrain development	\$541,770	Q2.Other	University of Southern California
Function of neuroligins	\$466,651	Q2.Other	Stanford University
GABAergic dysfunction in autism	\$278,486	Q2.Other	University of Minnesota
Genetically defined stem cell models of Rett and fragile X syndrome	\$175,000	Q2.S.D	Whitehead Institute for Biomedical Research
Genetic rescue of fragile X syndrome in mice by targeted deletion of PIKE	\$60,000	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Genetic studies of autism-related Drosophila neuroligin and neuroligin	\$550,000	Q2.Other	University of North Carolina at Chapel Hill
Glial control of neuronal receptive ending morphology	\$418,275	Q2.Other	Rockefeller University

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High-throughput DNA sequencing method for probing the connectivity of neural circuits at single-neuron resolution	\$430,650	Q2.Other	Cold Spring Harbor Laboratory
High throughput screen for small molecule probes for neural network development	\$405,000	Q2.Other	Johns Hopkins University
Identification of candidate genes at the synapse in autism spectrum disorders	\$169,422	Q2.Other	Yale University
Identification of targets for the neuronal E3 ubiquitin ligase PAM	\$60,000	Q2.S.D	Massachusetts General Hospital
Imaging PTEN-induced changes in adult cortical structure and function in vivo	\$300,339	Q2.Other	University of California, Los Angeles
Imaging signal transduction in single dendritic spines	\$382,200	Q2.Other	Duke University
Imaging synaptic neuroligin-neurexin complexes by proximity biotinylation: Applications to the molecular pathogenesis of autism	\$0	Q2.Other	Massachusetts Institute of Technology
Inhibitory mechanisms for sensory map plasticity in cerebral cortex	\$320,399	Q2.Other	University of California, Berkeley
Investigating the homeostatic role of MeCP2 in mature brain	\$35,400	Q2.S.D	Baylor College of Medicine
Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination	\$51,326	Q2.S.D	University of Texas Southwestern Medical Center
Investigation of social brain circuits in mouse models of the 16p11.2 locus	\$87,500	Q2.Other	Cold Spring Harbor Laboratory
In-vivo imaging of neuronal structure and function in a reversible mouse model for autism.	\$28,000	Q2.S.D	Baylor College of Medicine
In vivo targeted gene silencing, a novel method	\$218,472	Q2.Other	Indiana University-Purdue University Indianapolis
Kinetics of drug macromolecule complex formation	\$712,920	Q2.Other	University of California, San Diego
Limbic system function in carriers of the fragile X premutation	\$677,700	Q2.S.D	University of California, Davis
L-type calcium channel regulation of neuronal differentiation	\$32,129	Q2.S.D	Stanford University
Macrocephalic autism: Exploring and exploiting the role of PTEN	\$28,000	Q2.Other	University of Wisconsin - Madison
Mechanism of UBE3A imprint in neurodevelopment	\$33,616	Q2.S.D	University of California, Davis
Mechanisms of mGluR5 function and dysfunction in mouse autism models	\$419,137	Q2.S.D	University of Texas Southwestern Medical Center
Mechanisms of synapse elimination by autism-linked genes	\$75,000	Q2.S.D	University of Texas Southwestern Medical Center
MeCP2 modulation of bdnf signaling: Shared mechanisms of Rett and autism	\$314,059	Q2.S.D	University of Alabama at Birmingham
Mesocorticolimbic dopamine circuitry in mouse models of autism	\$87,337	Q2.S.D	Stanford University

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MET signaling in neural development and circuitry formation	\$83,810	Q2.Other	University of Southern California
MicroRNAs in synaptic plasticity and behaviors relevant to autism	\$131,220	Q2.S.D	Massachusetts General Hospital
Modulation of fxr1 splicing as a treatment strategy for autism in fragile X syndrome	\$0	Q2.S.D	Stanford University
Molecular mechanisms regulating synaptic strength	\$293,266	Q2.Other	Washington University in St. Louis
Morphogenesis and function of the cerebral cortex	\$409,613	Q2.Other	Yale University
Mouse models of human autism spectrum disorders: Gene targeting in specific brain regions	\$300,000	Q2.S.D	University of Texas Southwestern Medical Center
Mouse models of the neuropathology of tuberous sclerosis complex	\$253,177	Q2.S.D	University of Texas Health Science Center at Houston
MTHFR functional polymorphism C677T and genomic instability in the etiology of idiopathic autism in simplex families	\$114,984	Q2.Other	Queen's University
Neurexin-neuroligin trans-synaptic interaction in learning and memory	\$200,000	Q2.Other	Columbia University
Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome	\$31,022	Q2.S.D	Stanford University
Neuroligin, oxidative stress and autism	\$75,000	Q2.Other	Oklahoma Medical Research Foundation
Neuroligins and neurexins as autism candidate genes: Study of their association in synaptic connectivity	\$0	Q2.Other	University of California, San Diego
Neuronal activity-dependent regulation of MeCP2	\$426,857	Q2.S.D	Harvard Medical School
Neuropeptide regulation of juvenile social behaviors	\$14,755	Q2.Other	Boston College
New approaches to local translation: SpaceSTAMP of proteins synthesized in axons	\$246,254	Q2.S.D	Dana-Farber Cancer Institute
Olfactory abnormalities in the modeling of Rett syndrome	\$351,575	Q2.S.D	Johns Hopkins University
Pathophysiology of MeCP2 spectrum disorders	\$170,383	Q2.S.D	Baylor College of Medicine
Perturbed activity-dependent plasticity mechanisms in autism	\$158,034	Q2.Other	Harvard Medical School
Perturbed cortical patterning in autism	\$0	Q2.Other	Seattle Children's Hospital
PI3K/mTOR signaling as a novel biomarker and therapeutic target in autism	\$100,000	Q2.Other	Emory University
Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments	\$41,800	Q2.S.D	Yale University
Presynaptic fragile X proteins	\$90,000	Q2.S.D	Brown University
Presynaptic regulation of quantal size by the cation/H <sup>+</sup> exchangers NHE6 & NHE9	\$29,650	Q2.Other	University of California, Berkeley
Probing a monogenic form of autism from molecules to behavior	\$187,500	Q2.S.D	Stanford University

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Proteome and interaction networks in autism	\$31,250	Q2.Other	Harvard Medical School
Proteomics in drosophila to identify autism candidate substrates of UBE3A	\$313,159	Q2.S.D	University of Tennessee Health Science Center
Proteomics in drosophila to identify autism candidate substrates of UBE3A (supplement)	\$29,600	Q2.S.D	University of Tennessee Health Science Center
Quantitative proteomic approach towards understanding and treating autism	\$112,500	Q2.S.D	Emory University
Regulation of 22q11 genes in embryonic and adult forebrain	\$308,631	Q2.S.D	George Washington University
Regulation of activity-dependent ProSap2 synaptic dynamics	\$33,879	Q2.Other	Stanford University
Regulation of synapse elimination by FMRP	\$54,734	Q2.S.D	University of Texas Southwestern Medical Center
Regulation of synaptogenesis by cyclin-dependent kinase 5	\$180,264	Q2.Other	Massachusetts Institute of Technology
Retrograde synaptic signaling by Neurexin and Neuroligin in C. elegans	\$250,000	Q2.Other	Massachusetts General Hospital
Revealing protein synthesis defects in fragile X syndrome with new chemical tools	\$315,341	Q2.S.D	Stanford University
Role of autism-susceptibility gene, CNTNAP2, in neural circuitry for vocal communication	\$0	Q2.Other	University of California, Los Angeles
Role of GluK6 in cerebella circuitry development	\$55,826	Q2.Other	Yale University
Role of intracellular mGluR5 in fragile X syndrome and autism	\$150,000	Q2.S.D	Washington University in St. Louis
Role of micro-RNAs in ASD affected circuit formation and function	\$127,383	Q2.Other	University of California, San Francisco
Role of negative regulators of FGF signaling in frontal cortex development and autism	\$0	Q2.Other	University of California, San Francisco
Role of neurexin in the amygdala and associated fear memory	\$25,000	Q2.Other	Columbia University
Roles of miRNAs in regulation of Foxp2 and in autism	\$0	Q2.Other	Louisiana State University
Self-injurious behavior: An animal model of an autism endophenotype	\$0	Q2.Other	University of Florida
Serotonin signal transduction in two groups of autistic patients	\$0	Q2.Other	University of Illinois at Chicago
Study of fragile X mental retardation protein in synaptic function and plasticity	\$366,516	Q2.S.D	University of Texas Southwestern Medical Center
Synaptic phenotype, development, and plasticity in the fragile X mouse	\$401,852	Q2.S.D	University of Illinois at Urbana Champaign
The functional link between DISC1 and neuroligins: Two genetic factors in the etiology of autism	\$0	Q2.S.D	Children's Memorial Hospital, Chicago

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The microRNA pathway in translational regulation of neuronal development	\$352,647	Q2.S.D	University of Massachusetts Medical School
The role of CNTNAP2 in embryonic neural stem cell regulation	\$75,000	Q2.Other	Johns Hopkins University School of Medicine
The role of Fox-1 in neurodevelopment and autistic spectrum disorder	\$145,757	Q2.Other	University of California, Los Angeles
The role of intracellular metabotropic glutamate receptor 5 at the synapse	\$26,338	Q2.S.D	Washington University in St. Louis
The role of MeCP2 in Rett syndrome	\$329,781	Q2.S.D	University of California, Davis
The role of MeCP2 in Rett syndrome (supplement)	\$38,273	Q2.S.D	University of California, Davis
The role of UBE3A in autism	\$62,500	Q2.S.D	Harvard Medical School
Transcriptional responsiveness in lymphoblastoid cell lines	\$52,863	Q2.Other	University of Pennsylvania
TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome	\$0	Q2.S.D	Case Western Reserve University
Ube3a requirements for structural plasticity of synapses	\$0	Q2.Other	University of North Carolina at Chapel Hill
Underlying mechanisms in a cerebellum-dependent model of autism	\$0	Q2.S.D	Harvard Medical School
Using fruit flies to map the network of autism-associated genes	\$31,249	Q2.Other	University of California, San Diego
Young development of a novel pet ligand for detecting oxytocin receptors in brain	\$261,360	Q2.Other	Emory University

